

Attachment A

Arkansas BEAD Program – Instructions: Engineering Design Package for a Fiber-Optic Project

Prepare an “Engineering Design Package” in a .pdf format, with clear labeling, indication of scale and a comprehensive legend to explain symbols and abbreviations used on drawings. Adhere to relevant industry standards for fiber-optic network design and construction.

Sections

1. Cover Page (One Page)

Include your organization name as it exists in the Arkansas Broadband Grantor Portal (BEAD Application Portal), your project name, and the date of your submission.

2. Narrative Summary (One Page)

Explain how the design supports the number of proposed passings, routes, speeds, and latency. Specify construction methods (aerial versus buried) and materials (e.g., conduit) and the age and condition of existing infrastructure that will connect to the new build. Specify whether utility coordination will be needed.

3. Permitting (One Page)

Include a list of applicable permits (including EHP) required in the project area.

4. Network Design

Upload an industry-standard network design diagram (in .pdf format), certified by a professional engineer. Include the following sections:

Section	Description	Details
A ¹	Area/Coverage Map	A high-level aerial view of the entire network area, showing the main fiber routes, <i>conduit paths and conduit access points</i> . [*] Include key landmarks and labeling of streets, etc. Show middle-mile connection.
B	Network Topology Diagram	Illustrative representation of network architecture, showing how each component is connected within the network.

¹ If your area of coverage is large, please submit as four quadrants, one per page.

[Naturally connected.](#)

Section	Description	Details
C	Equipment Details	Specifications of all network equipment such as optical line terminals (OLTs), fiber distribution hubs (FDHs), including their locations and mounting points, details on cable termination points, and fiber management systems within cabinets.
D	Certification Statement and Stamp	Engineer's professional stamp on the drawing signifying review and approval of the design, stating that the proposed network can deliver broadband service that meets the requisite performance requirements to all locations served by the project (see "Attachment B").

*Per Page 66 of the BEAD NOFO; ii. Conduit Access Points:

"Any Funded Network deployment project that involves laying fiber-optic cables or conduit underground or along a roadway must include interspersed conduit access points at regular and short intervals for interconnection by unaffiliated entities. Where a project proposes to lay conduit, Eligible Entities shall require prospective subgrantees to propose to deploy a reasonable amount of excess conduit capacity and to propose a conduit access point interval as part of the grant application process and shall consider the adequacy of the prospective subgrantee's proposed excess conduit capacity and access points when evaluating the application."²

Note: Per the Conditional Limited Programmatic Waiver issued by NTIA, the PE Certification Requirement for the capital investment schedule is waived conditioned on the submission of a capital investment schedule evidencing complete build-out and initiation of service within four years of the date on which the entity receives the subgrant.³

² <https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf>

³ [1] https://broadbandusa.ntia.gov/funding-programs/policies-waivers/BEAD_-_Conditional_Limited_Programmatic_Waiver_and_Clarification_of_Professional_Engineer_Certification
Naturally connected.

Attachment B

Arkansas BEAD Program – Professional Engineer Certification

I, [____], am a licensed professional engineer in the State of [____], with license number [_____].

I have reviewed the plans, specifications, and documents related to the proposed project.

I certify that, to the best of my knowledge and belief, the design and planned construction of the project comply with all applicable laws, regulations, and codes.

The project has been designed and prepared in accordance with accepted engineering practices and standards.

The project will meet the minimum requirements within the guidelines provided.

The proposed network can deliver broadband service that meets the requisite performance requirements⁴ to all locations served by the project.

Signed _____ Date _____

[PE STAMP HERE]

⁴ According to the BEAD NOFO, the performance requirements for broadband service considered "Reliable Broadband Service" are a minimum download speed of 100 Mbps and a minimum upload speed of 20 Mbps, with 95% of latency measurements falling at or below 100 milliseconds round-trip time.